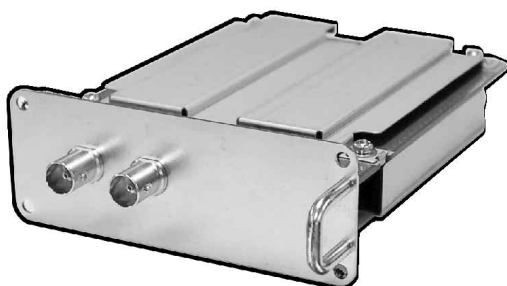


Service Manual

HD-SDI Terminal Board with Audio

TY-FB10HD

TY-FB10HDC



⚠ WARNING

This service information is designed for experienced service personnel only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential danger in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced service personnel. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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1 Safety Precautions

1.1. General Guidelines

1. When conducting repairs and servicing, do not attempt to modify the equipment, its parts or its materials.
2. When wiring units (with cables, flexible cables or lead wires) are supplied as repair parts and only one wire or some of the wires have been broken or disconnected, do not attempt to repair or re-wire the units. Replace the entire wiring unit instead.
3. When conducting repairs and servicing, do not twist the Faston connectors but plug them straight in or unplug them straight out.
4. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
5. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
6. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.1.1. Leakage Current Cold Check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between $1\text{M}\Omega$ and $5.2\text{M}\Omega$.

When the exposed metal does not have a return path to the chassis, the reading must be ∞ .

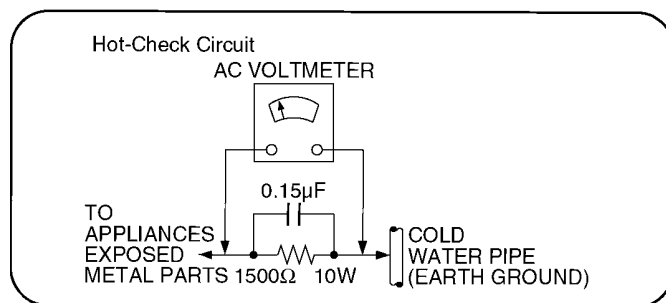


Figure 1

1.1.2. Leakage Current Hot Check (See Figure 1.)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a $1.5\text{k}\Omega$, 10 watts resistor, in parallel with a $0.15\mu\text{F}$ capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

2 Prevention of Electrostatic Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electrostatic discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

Caution

Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by \triangle in the schematic diagrams, Exploded Views and replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

3 About lead free solder (PbF)

Note: Lead is listed as (Pb) in the periodic table of elements.

In the information below, Pb will refer to Lead solder, and PbF will refer to Lead Free Solder.

The Lead Free Solder used in our manufacturing process and discussed below is (Sn+Ag+Cu).

That is Tin (Sn), Silver (Ag) and Copper (Cu) although other types are available.

This model uses Pb Free solder in it's manufacture due to environmental conservation issues. For service and repair work, we'd suggest the use of Pb free solder as well, although Pb solder may be used.

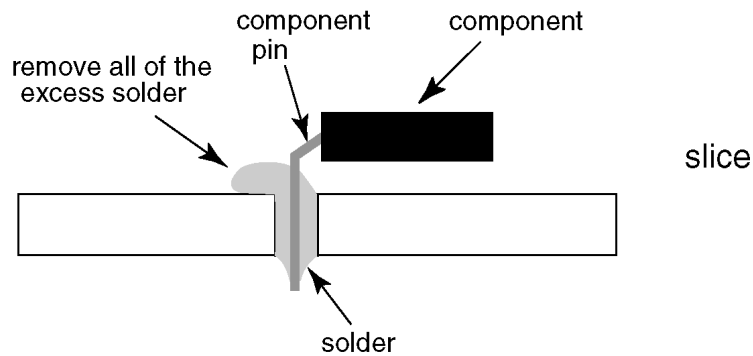
PCBs manufactured using lead free solder will have the PbF within a leaf Symbol PbF stamped on the back of PCB.

Caution

- Pb free solder has a higher melting point than standard solder. Typically the melting point is 50 ~ 70 °F (30~40°C) higher. Please use a high temperature soldering iron and set it to 700 ± 20 °F (370 ± 10 °C).
- Pb free solder will tend to splash when heated too high (about 1100 °F or 600 °C).

If you must use Pb solder, please completely remove all of the Pb free solder on the pins or solder area before applying Pb solder. If this is not practical, be sure to heat the Pb free solder until it melts, before applying Pb solder.

- After applying PbF solder to double layered boards, please check the component side for excess solder which may flow onto the opposite side. (see figure below)



Suggested Pb free solder

There are several kinds of Pb free solder available for purchase. This product uses Sn+Ag+Cu (tin, silver, copper) solder. However, Sn+Cu (tin, copper), Sn+Zn+Bi (tin, zinc, bismuth) solder can also be used.

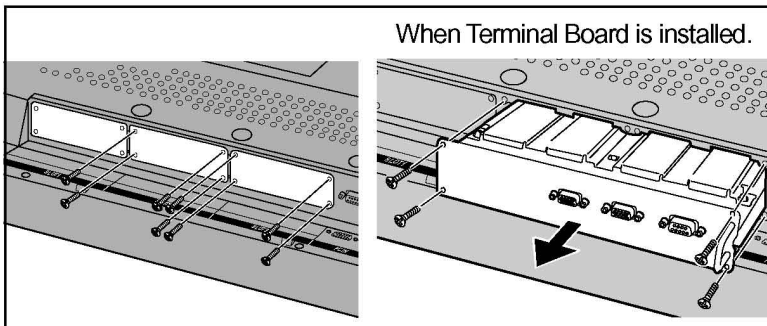
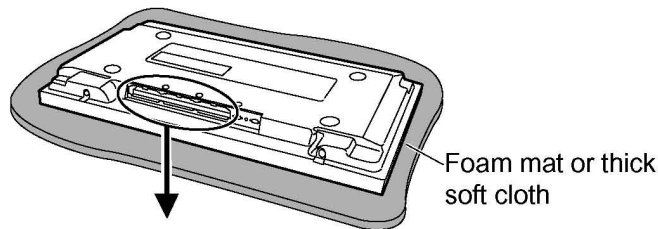
0.3mm X 100g	0.6mm X 100g	1.0mm X 100g

4 Replacement

The following explanation uses the 42/50-inch plasma display as an example. The terminal board shown is a typical example of one that can be replaced.

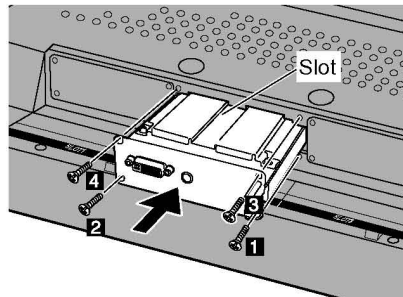
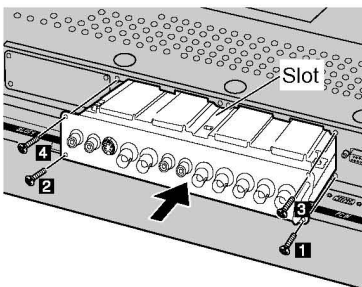
- Before proceeding with the replacement steps, be sure to turn off the entire system including the display, unplug all components from their outlets, and disconnect all the interconnect cables from the display.

The following example shows installation of a dual slot size board and a single slot size board.



1. Removing the dummy cover or mounted terminal board from display:

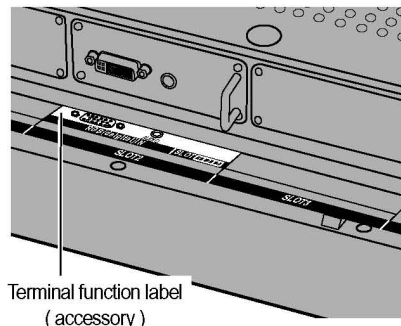
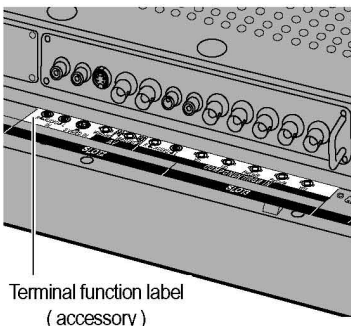
- Remove the slot cover securing screws (4 or 8 screws) on the back of the display. If a terminal board is already installed, grip the handle of the terminal board, and slowly pull out in the direction of the arrow.



2. Installing desired Terminal Board:

1. Insert the desired Terminal Board into the slot until it is firmly plugged into the card connector.
 - Make sure that the Board does not ride on the two lower claws.
2. Secure using the previously removed screws or those supplied with the unit. Tighten screws in the numbered order **1 - 4**.

Please note that there are slot fastening screws at 4 points on each slot (at 2 locations on both the left and right edges), so the number of fastening screws will vary depending on the number of slot insertions. Be sure to fasten all screws tightly.



3. Applying the terminal function label:

Peel off the backing sheet from the terminal function label (accessory) and affix it over the existing label.

- Make sure that the label is affixed with the correct position.

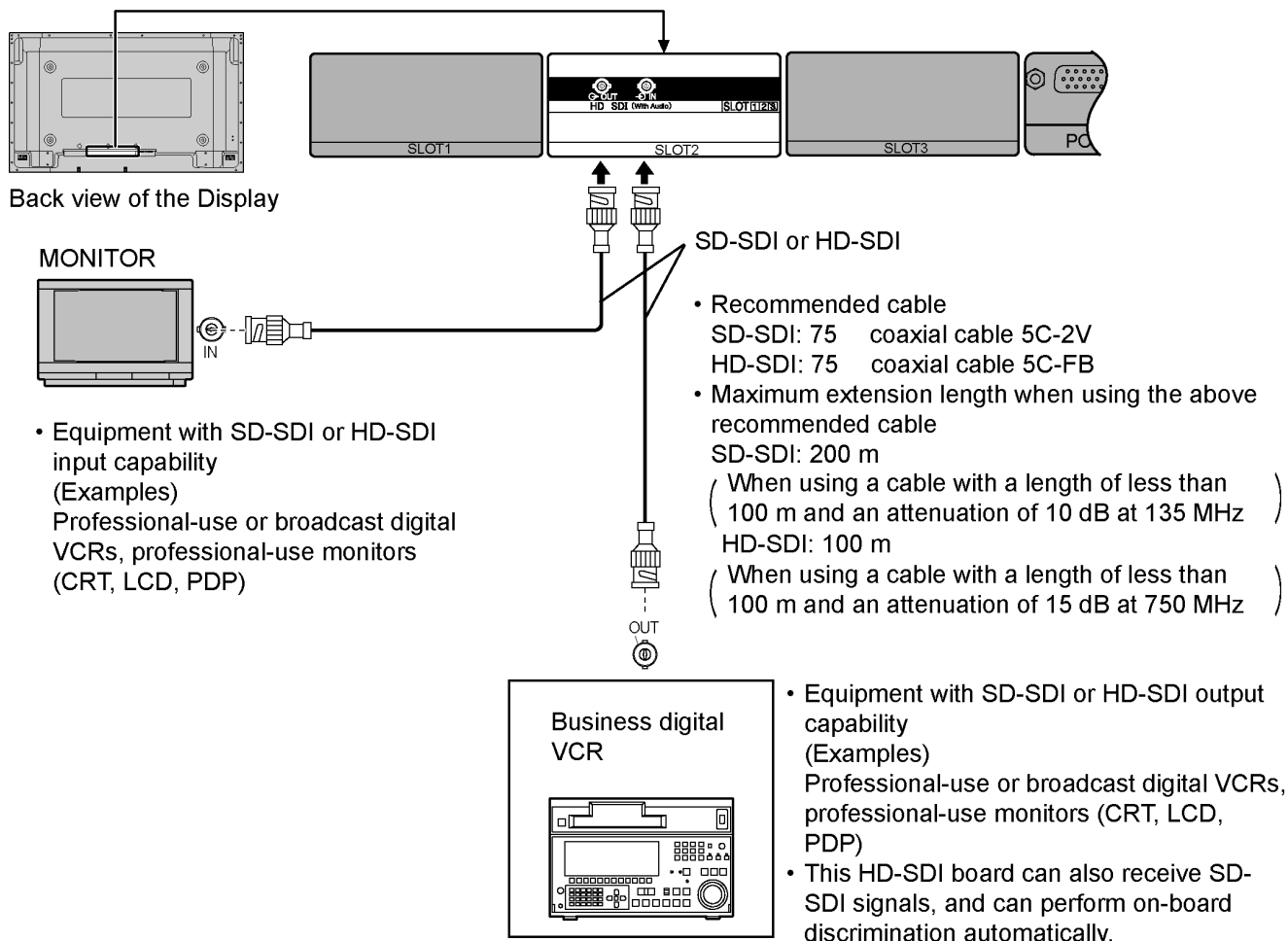
Have the customer keep the removed Terminal Board for future servicing needs.

5 Connection

Slot Nos. of the display unit that are compatible with terminal board attachments

2 slots model	Slot1, Slot2
3 slots model	Slot1, Slot2 (Slot3 is not compatible)

* This terminal board supports the PF10 and subsequent series.



Video signals supported by the unit

	Signal format	fV (Hz)	Scanning format	fH (kHz)	Dot clock (MHz)	Number of active pixels	Total number of pixels	Number of active lines	Total number of lines
1	1125 (1080) / 60i : 59.94i	60	2:1 Interlace	33.75	74.25	1920	2200	1080	1125
2	1125 (1080) / 50i	50	2:1 Interlace	28.125	74.25	1920	2640	1080	1125
3	750 (720) / 60p : 59.94p	60	Progressive	45	74.25	1280	1650	720	750
4	750 (720) / 50p	50	Progressive	37.5	74.25	1280	1980	720	750
5	1125 (1080) / 24sF : 23.985sF	48	Progressive (sF)	27	74.25	1920	2750	1080	1125
6	1125 (1080) / 30p	30	Progressive	33.75	74.25	1920	2200	1080	1125
7	1125 (1080) / 25p	25	Progressive	28.125	74.25	1920	2640	1080	1125
8	1125 (1080) / 24p	24	Progressive	27	74.25	1920	2750	1080	1125
9	525 (480) / 59.94i	59.94	2:1 Interlace	15.734	27	1440	1716	486	525
10	625 (575) / 50i	50	2:1 Interlace	15.625	27	1440	1728	576	625

Note:

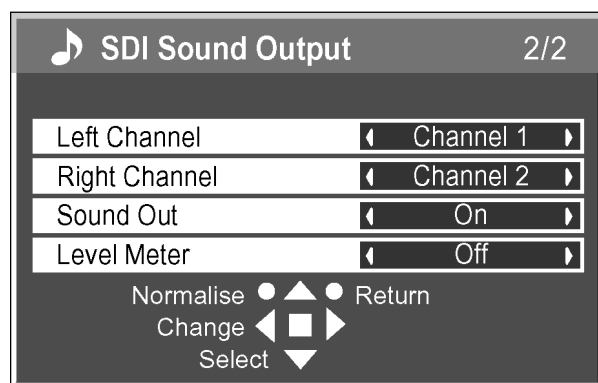
- Additional equipment and cables shown are not supplied with this set.

Audio signals supported by the unit

Signal format	Sampling frequency (kHz)	Number of bits	Audio channels (ch)	Synchronized/not synchronized with video signals
1125(1080)/60i:59.94i:50i 1125(1080)/30p:25p:24sF:23.985sF 750(720)/60p:59.94p:50p	48	20bit/24bit	16	Synchronized or not synchronized
525(480)/59.94i 625(575)/50i	48	20bit/24bit	16	Synchronized

By installing this terminal board in a compatible display, its audio settings can be performed by the display. (For the display and setting procedures as well as other details, refer to the operating instructions of the display main unit.)

In the Sound menu of the Display



Left Channel: Selects the SDI audio channels whose signals are to be output to the left channel of the display.

Channel 1 to channel 16
(Initial setting: Channel 1)

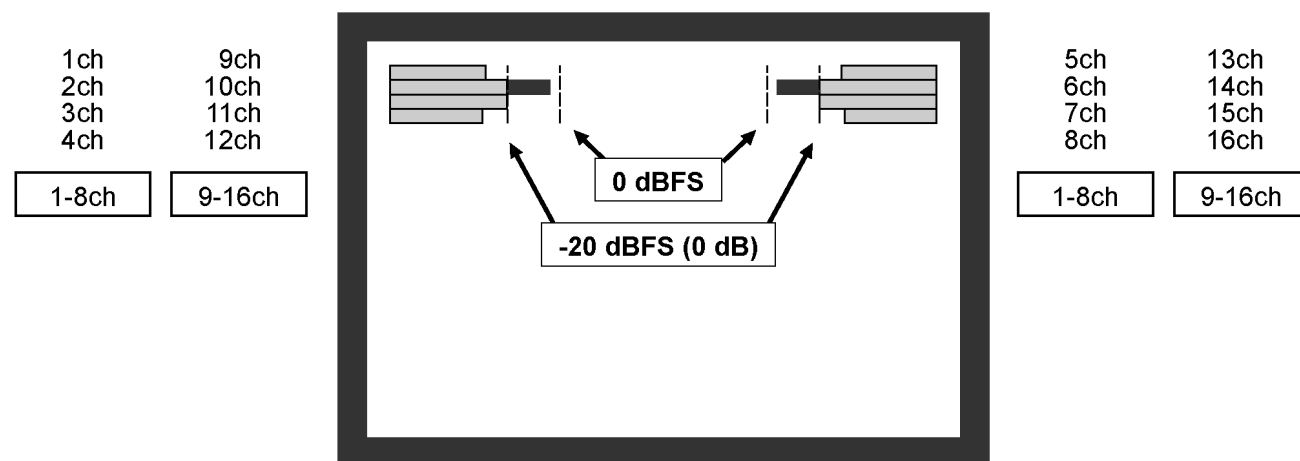
Right Channel: Selects the SDI audio channels whose signals are to be output to the right channel of the display.

Channel 1 to channel 16
(Initial setting: Channel 2)

Sound Out: Sets the SDI audio output on or off
(initial setting: On).

Level Meter: Displays the SDI audio level meter.
Off, channels 1 to 8 (1-8ch), channels 9 to 16 (9-16ch)
(Initial setting: Off)

Level meter display



Shown above is a screen display for 1-8ch and 9-16ch.

Notes:

- Audio signal output will be suspended if signals other than the ones listed in “Audio signals supported by the unit” have been input.
- Similarly, audio signal output will be suspended if a channel which is not one of the multiple channels among the SDI signals has been selected.

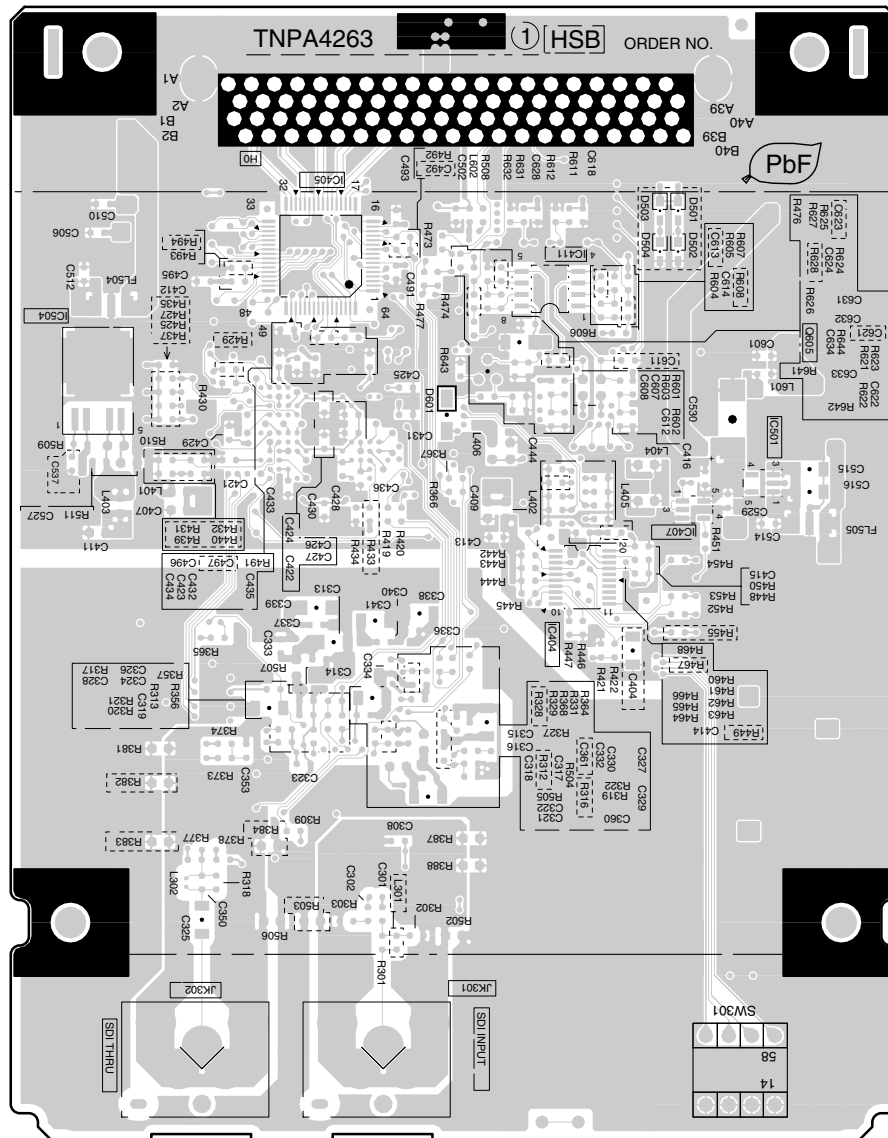
6 Circuit Board Layout

6.1. HSB-Board

Parts Location

HSB-BOARD	
IC	
IC3404	C-3
IC3405	B-4
IC3407	C-3
IC3411	C-4
IC3501	D-3
IC3504	A-4
TRANSISTOR	
Q3605	D-4

HSB-BOARD (FOIL SIDE)
TXNHSB10XYT

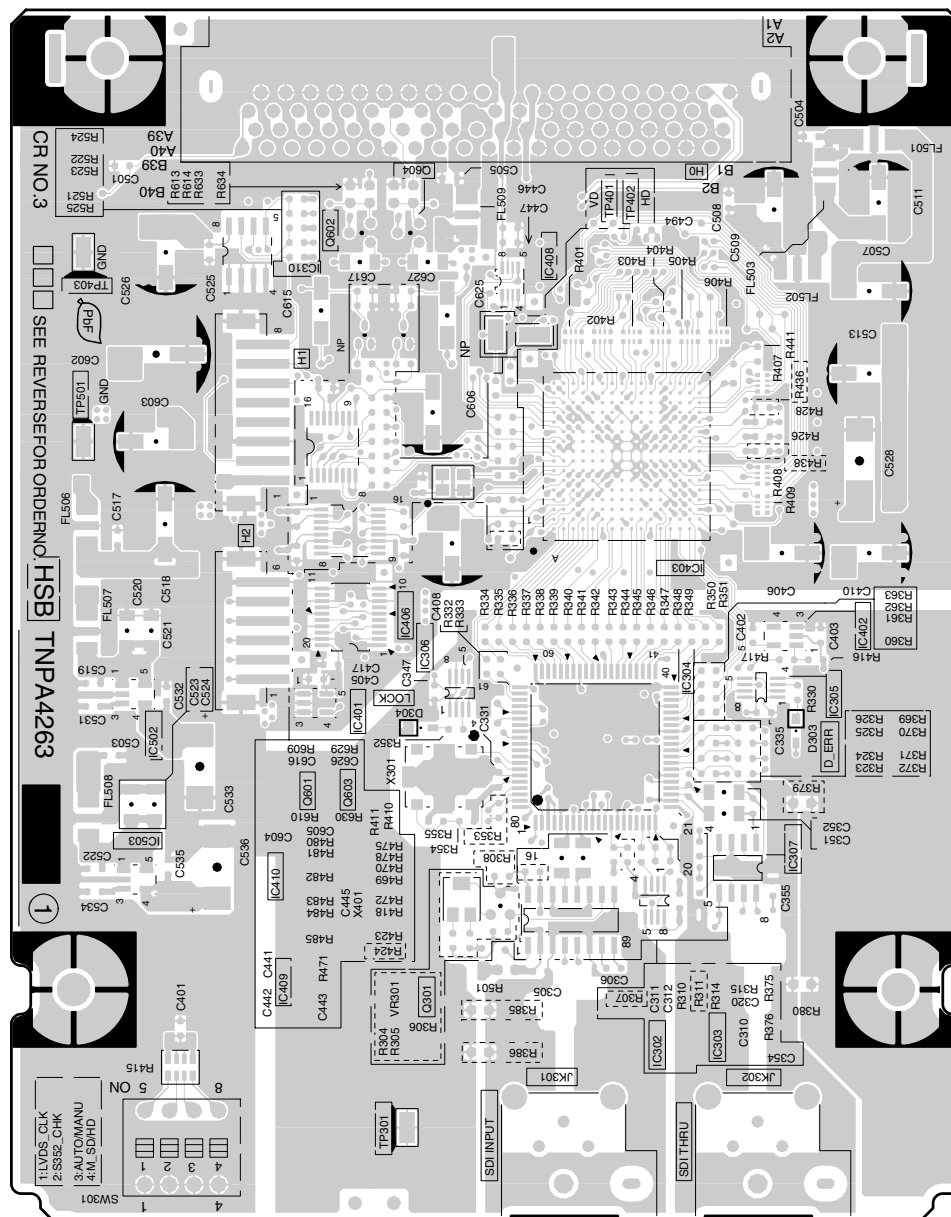


TY-FB10HD
HHH-BOARD TXNHSB10XYT

Parts Location

HSB-BOARD					
IC		IC3408 IC3409 IC3410 IC3502 IC3503	C-4 B-2 B-2 A-3 A-2	TP	
IC3302	C-2	TRANSISTOR		TP3301	B-1
IC3303	C-2			TP3401	C-4
IC3304	C-3			TP3402	C-4
IC3305	D-3			TP3403	A-4
IC3306	B-3			TP3501	A-4
IC3307	C-2	Q3301 Q3601 Q3602 Q3603 Q3604	B-2 B-2 B-4 B-2 B-4	VOLUME	
IC3310	B-4			VR3301	B-2
IC3401	B-3				
IC3402	D-3				
IC3403	C-3				
IC3406	B-3				

HSB-BOARD (COMPONENT SIDE)
TXNHSB10XYT



TY-FB10HD
HHH-BOARD TXNHSB10XYT







7 Block and Schematic Diagram

7.1. Schematic Diagram Notes

Important Safety Notice

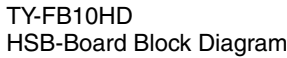
Components identified by \triangle mark have special characteristics important for safety.
When replacing any of these components, use only manufacture's specified parts.

Notes:

- 1. **Resistor**
Unit of resistance is OHM [Ω] (K=1,000, M=1,000,000).
- 2. **Capacitor**
Unit of capacitance is μ F, unless otherwise noted.
- 3. Coil
Unit of inductance is H, unless otherwise noted.
- 4. Test Point
 : Test Point position
- 5. Earth Symbol
 : Chassis Earth (Cold)  : Line Earth (Hot)
- 6. Voltage Measurement
Voltage is measured by a DC voltmeter.
Conditions of the measurement are the following:
Receiving Signal Colour Bar signal (RF)
All customer's controls Maximum positions
- 7. When arrow mark () is found, connection is easily found from the direction of arrow.
- 8. Indicates the major signal flow. : Video  Audio 
- 9. This schematic diagram is the latest at the time of printing and subject to change without notice.

Remarks:

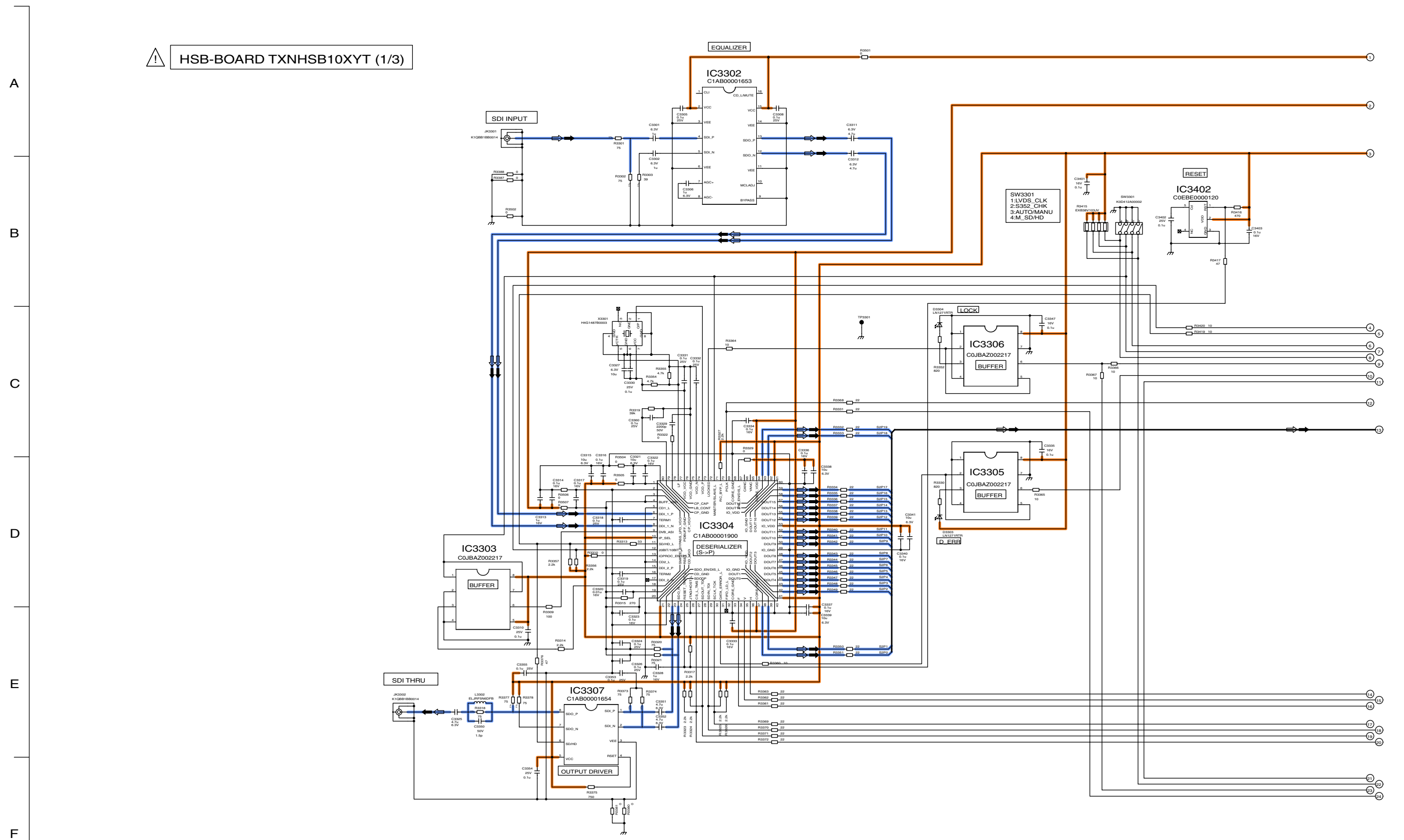
- 1. The Power Circuit contains a circuit area which uses a separate power supply to isolate the earth connection.
The circuit is defined by HOT and COLD indications in the schematic diagram. Take the following precautions.
All circuits, except the Power Circuit, are cold.
Precautions
 - a. Do not touch the hot part or the hot and cold parts at the same time or you may be shocked.
 - b. Do not short- circuit the hot and cold circuits or a fuse may blow and parts may break.
 - c. Do not connect an instrument, such as an oscilloscope, to the hot and cold circuits simultaneously or a fuse may blow.
Connect the earth of instruments to the earth connection of the circuit being measured.
 - d. Make sure to disconnect the power plug before removing the chassis.



TY-FB10HD

HSB-Board Block Diagram

7.3. HSB-Board (1 of 3) Schematic Diagram

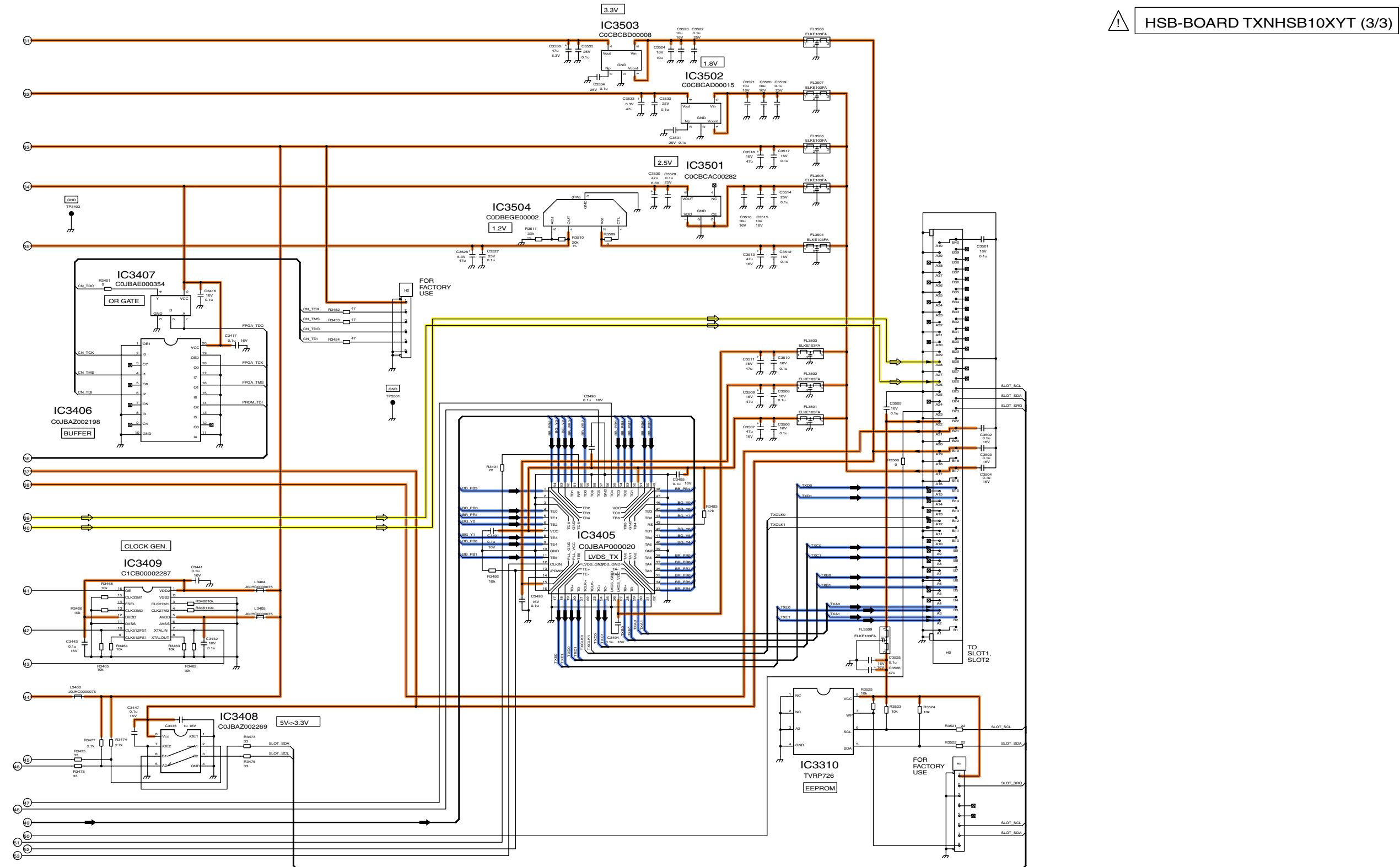


TY-FB10HD
HSB-Board (1 of 3) Schematic Diagram

TY-FB10HD
HSB-Board (1 of 3) Schematic Diagram

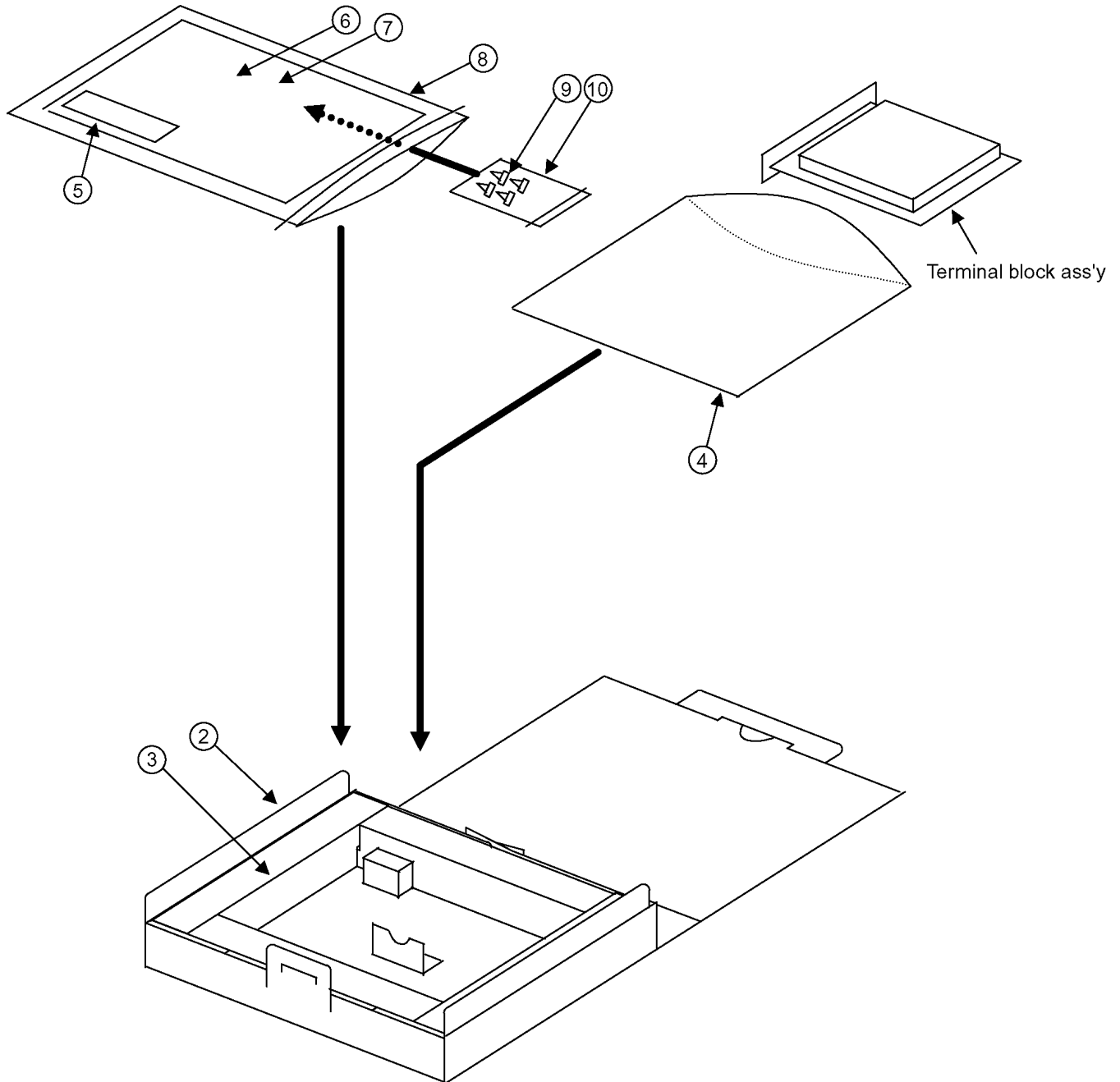


7.5. HSB-Board (3 of 3) Schematic Diagram

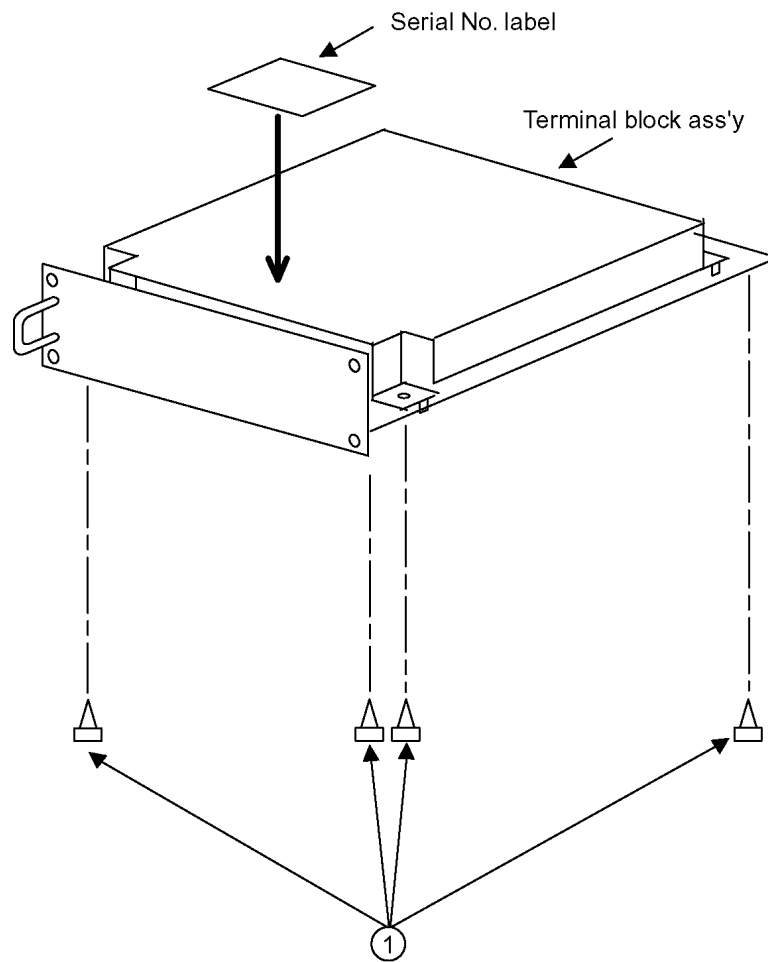


8 Exploded Views & Replacement Parts List

8.1. Parts Location (1)



8.2. Parts Location (2)



Components identified by mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

Type	Allowance
------	-----------

Type	Allowance
C : Ceramic	C : $\pm 0.25\text{pF}$
E : Electrolytic	D : $\pm 0.5\text{pF}$
P : Polyester	F : $\pm 1\text{pF}$
Polyprop	G : $\pm 3\text{pF}$
lene	J : $\pm 5\text{pF}$
T : Tantalum	K : $\pm 10\text{pF}$
	L : $\pm 15\text{pF}$
	M : $\pm 20\text{pF}$
	P : +100%, -0%
	Z : +80%, -20%

8.4. Mechanical Replacement Parts List

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	THEL027N	SCREW	8	
	XSN26+6FJ	SCREW	4	
2	TPCB13149	CARTON BOX	1	TY-FB10HD △
2	TPCB13166	CARTON BOX	1	TY-FB10HDC △
3	TPDF1103	CUSHION	1	
4	TPEH135	PROTECT COVER	1	
5	TBMU730	TERAMINAL SHEET	1	TY-FB10HD
5	TBMU828	TERAMINAL SHEET	1	TY-FB10HDC
6	TQZH461-1	INSTRUCTION SHEET (SLOT)	1	TY-FB10HD △
6	TQZH886	INSTRUCTION SHEET (SLOT)	1	TY-FB10HDC △
7	TQZH822	INSTRUCTION SHEET	1	TY-FB10HD △
7	TQZH934	INSTRUCTION SHEET	1	TY-FB10HDC △
8	XZBT6506	POLY BAG	1	
9	THEL0239	SCREW	4	
10	TQE6691	POLY BAG (SCREW)	1	

8.5. Electrical Replacement Parts List

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C3301,02	ECJ1VB0J105K	C 1UF, K, 16V	2	
C3305	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C3306	ECJ1VB0J105K	C 1UF, K, 16V	1	
C3308	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C3310	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C3311,12	ECJ3YB0J475K	C 47UF, J, 25V	2	
C3313	ECJ3XB1C105K	C 1UF, K, 16V	1	
C3314	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3315	ECJ3XB0J106M	C 10UF, M, 6.3V	1	
C3316,17	ECJ1VF1C104Z	C 0.1UF, Z, 16V	2	
C3318,19	ECJ1VB1E104K	C 0.10UF, K, 25V	2	
C3320	ECJ1XB1C103K	C 0.010UF, K, 16V	1	
C3321	ECJ3XB0J106M	C 10UF, M, 6.3V	1	
C3322,23	ECJ1VF1C104Z	C 0.1UF, Z, 16V	2	
C3324	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C3325	ECJ3YB0J475K	C 47UF, J, 25V	1	
C3326	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C3327	ECJ3XB0J106M	C 10UF, M, 6.3V	1	
C3328	ECJ3XB1C105K	C 1UF, K, 16V	1	
C3329	ECJ1VB1H102K	C 1000UF, Z, 50V	1	
C3330-32	ECJ1VB1E104K	C 0.10UF, K, 25V	3	
C3333-37	ECJ1VF1C104Z	C 0.1UF, Z, 16V	5	
C3338,39	ECJ3XB0J106M	C 10UF, M, 6.3V	2	
C3340	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3341	ECJ3XB0J106M	C 10UF, M, 6.3V	1	
C3347	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3350	ECJ1VC1H1R5C	C 2.7PF, K, 50V	1	
C3351,52	ECJ3YB0J475K	C 47UF, J, 25V	2	
C3353-55	ECJ1VB1E104K	C 0.10UF, K, 25V	3	
C3360	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C3401	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3402	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C3403	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3405	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3406	EEH1B1C470P	C 47PF, J, 16V	1	
C3407	ECJ2FF1A106Z	C 0.001UF, Z, 10V	1	
C3408	EEH1B1C470P	C 47PF, J, 16V	1	
C3409	ECJ2FF1A106Z	C 0.001UF, Z, 10V	1	
C3410	EEH1B1C470P	C 47PF, J, 16V	1	
C3411	ECJ2FF1A106Z	C 0.001UF, Z, 10V	1	
C3412-17	ECJ1VF1C104Z	C 0.1UF, Z, 16V	6	
C3421-36	ECJ1VF1C104Z	C 0.1UF, Z, 16V	16	
C3441-43	ECJ1VF1C104Z	C 0.1UF, Z, 16V	3	
C3444	ECJ2FB0J106K	C 10UF, Z, 6.3V	1	
C3445	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3446	ECJ1XF1C105Z	C 1UF, Z, 16V	1	
C3447	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3491	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3493-96	ECJ1VF1C104Z	C 0.1UF, Z, 16V	4	
C3501-06	ECJ1VF1C104Z	C 0.1UF, Z, 16V	6	
C3507	EEH1B1C470P	C 47PF, J, 16V	1	
C3508	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3509	EEH1B1C470P	C 47PF, J, 16V	1	
C3510	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3511	EEH1B1C470P	C 47PF, J, 16V	1	
C3512	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3513	EEH1B1C470P	C 47PF, J, 16V	1	
C3514	ECJ1VB1E104K	C 0.10UF, K, 25V	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C3515,16	ECJ3XB1C106M	C 1.0UF, K, 16V	2	
C3517	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3518	EEH1B1C470P	C 47PF, J, 16V	1	
C3519	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C3520,21	ECJ3XB1C106M	C 1.0UF, K, 16V	2	
C3522	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C3523,24	ECJ3XB1C106M	C 1.0UF, K, 16V	2	
C3525	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3526	EEH1B1C470P	C 47PF, J, 16V	1	
C3527	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C3528	EEFCD0J470ER	47UF	1	
C3529	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C3530	EEFCD0J470ER	47UF	1	
C3531,32	ECJ1VB1E104K	C 0.10UF, K, 25V	2	
C3533	EEFCD0J470ER	47UF	1	
C3534,35	ECJ1VB1E104K	C 0.10UF, K, 25V	2	
C3536	EEFCD0J470ER	47UF	1	
C3601	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C3602	EEH1B1A101P	C 100PF, J, 10V	1	
C3603	EEH1B1C470P	C 47PF, J, 16V	1	
C3604,05	ECJ1VB1E104K	C 0.10UF, K, 25V	2	
C3606	F2G1H100A031	E 10UF, 50V	1	
C3607,08	FLJ0J1060004	C 0.010UF, K, 16V	2	
C3612	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C3614	ECJ1XC1H181J	C 180PF, J, 50V	1	
C3615	EEH1P1C100R	C 10PF, J, 16V	1	
C3616	F1H1H272A219	C 2700PF, K, 50V	1	
C3617	ECJ3XF1C475Z	C 4.7UF, Z, 16V	1	
C3618	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C3622	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C3624	ECJ1XC1H181J	C 180PF, J, 50V	1	
C3625	EEH1P1C100R	C 10PF, J, 16V	1	
C3626	F1H1H272A219	C 2700PF, K, 50V	1	
C3627	ECJ3XF1C475Z	C 4.7UF, Z, 16V	1	
C3628	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C3631	ECJ1VB1E104K	C 0.10UF, K, 25V	1	
C3632	ECJ3YB1E106M	C 10 UF, K, 25V	1	
C3633	ECJ1VF1C104Z	C 0.1UF, Z, 16V	1	
C3634	ECJ1VB1C105K	C 0.01UF, K, 16V	1	
D3303,04	LN1271RTR	LED	2	
D3601	B0JCME000037	DIODE	1	
FL3501-09	ELKE103FA	NOISE FILTER	9	
H0	K1KA80B00037	80P CONNECTOR	1	
H1	K1KA08AA0714	8P CONNECTOR	1	
H2	K1KA06AA0714	6P CONNECTOR	1	
IC3302	C1AB00001653	IC	1	
IC3303	C0JBAZ002217	IC	1	
IC3304	C1AB00001900	IC	1	
IC3305,06	C0JBAZ002217	IC	2	
IC3307	C1AB00001654	IC	1	
IC3310	TVRP726	IC	1	
IC3401	C0EBD0000038	IC	1	
IC3402	C0EBE0000120	IC	1	
IC3403	C12BZ0003207	IC	1	
IC3404	C3FBKZ000003	IC	1	
IC3405	C0JBAP000020	IC	1	
IC3406	C0JBAZ002198	IC	1	
IC3407	C0JBAE000354	IC	1	
IC3408	C0JBAZ002269	IC	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
IC3409	C1CB00002287	IC	1	
IC3410	C0FBBK000038	IC	1	
IC3411	C0ABBA000168	IC	1	
IC3501	C0CBCAC00282	IC	1	
IC3502	C0CBCAD00015	IC	1	
IC3503	C0CBCBD00008	IC	1	
IC3504	C0DBEGE00002	IC	1	
JK3301, 02	K1QBB1BB0014	CONNECTOR	2	
L3302	ELJRF5N6DBB	CHIP COIL	1	
L3401-06	J0JCC0000241	CHIP INDUCTOR	6	
L3601, 02	J0JHC0000078	CHIP INDUCTOR	2	
PCB	TXNHSB10XYT	CIRCUIT BOARD HD-SDI	1	△
Q3601	2SD1979STX	TRANSISTOR	1	
Q3602	2SD0601ARL	TRANSISTOR	1	
Q3603	2SD1979STX	TRANSISTOR	1	
Q3604	2SD0601ARL	TRANSISTOR	1	
Q3605	2SB0709ARL	TRANSISTOR	1	
R3301, 02	ERJ3EKF75R0	M 0.75HM, 1/16W	2	
R3303	ERJ3EKF39R0	M 39 OHM, 1/16W	1	
R3309	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	
R3310	ERJ3GEY0R00	M 0 OHM, 1/16W	1	
R3313	ERJ3GEYJ330	M 33 OHM, J, 1/16W	1	
R3314	ERJ3GEYJ222	M 2.2KOHM, J, 1/16W	1	
R3315	ERJ3GEYJ271	M 270 OHM, J, 1/16W	1	
R3317	ERJ3GEYJ222	M 2.2KOHM, J, 1/16W	1	
R3318	ERJ3EKF75R0	M 0.75HM, 1/16W	1	
R3319	D0GB393JA041	M 39KOHM, J, 1/16W	1	
R3320, 21	ERJ3EKF75R0	M 75 OHM, J, 1/16W	2	
R3322	ERJ3GEY0R00	M 0 OHM, 1/16W	1	
R3323-27	ERJ3GEYJ222	M 2.2KOHM, J, 1/16W	5	
R3329	ERJ3GEY0R00	M 0 OHM, 1/16W	1	
R3330	ERJ3GEYJ821	M 820 OHM, J, 1/16W	1	
R3331-51	ERJ3GEYJ220	M 22 OHM, J, 1/16W	21	
R3352	ERJ3GEYJ821	M 820 OHM, J, 1/16W	1	
R3354, 5	ERJ3GEYJ472	M 4.7KOHM, J, 1/16W	2	
R3356, 57	ERJ3GEYJ222	M 2.2KOHM, J, 1/16W	2	
R3360	ERJ3GEYJ100	M 10 OHM, J, 1/16W	1	
R3361-63	ERJ3GEYJ220	M 22 OHM, J, 1/16W	3	
R3364-67	ERJ3GEYJ100	M 10 OHM, J, 1/16W	4	
R3368-72	ERJ3GEYJ220	M 22 OHM, J, 1/16W	5	
R3373, 74	ERJ3EKF75R0	M 0.75HM, 1/16W	2	
R3375	ERJ3GEYJ751	M 750 OHM, J, 1/16W	1	
R3376	ERJ3GEYJ470	M 47 OHM, J, 1/16W	1	
R3377, 78	ERJ3EKF75R0	M 0.75HM, 1/16W	2	
R3380, 81	ERJ6GEY0R00V	M 0 OHM, 1/10W	2	
R3387, 88	ERJ6GEY0R00V	M 0 OHM, 1/10W	2	
R3401-09	EXB28V470JX	RESISTOR ARRAY	9	
R3410, 11	ERJ3GEYJ470	M 47 OHM, J, 1/16W	2	
R3415	EXB38V103JV	RESISTOR ARRAY	1	
R3416	ERJ3GEYJ471	M 470 OHM, J, 1/16W	1	
R3417	ERJ3GEYJ470	M 47 OHM, J, 1/16W	1	
R3418	D0GB103JA057	M 10KOHM, J, 1/16W	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3419, 20	ERJ3GEYJ100	M 10 OHM, J, 1/16W	2	
R3421	ERJ3GEYJ472	M 4.7KOHM, J, 1/16W	1	
R3422	ERJ3GEYJ470	M 47 OHM, J, 1/16W	1	
R3423	ERJ3GEY0R00	M 0 OHM, 1/16W	1	
R3426	ERJ3GEY0R00	M 0 OHM, 1/16W	1	
R3428	ERJ3GEY0R00	M 0 OHM, 1/16W	1	
R3430	ERJ3GEY0R00	M 0 OHM, 1/16W	1	
R3434	D0GB103JA057	M 10KOHM, J, 1/16W	1	
R3441	ERJ3GEY0R00	M 0 OHM, 1/16W	1	
R3442-46	ERJ3GEYJ472	M 4.7KOHM, J, 1/16W	5	
R3447	ERJ3GEYJ331	M 330 OHM, J, 1/16W	1	
R3448	ERJ3GEYJ472	M 4.7KOHM, J, 1/16W	1	
R3450, 51	ERJ3GEY0R00	M 0 OHM, 1/16W	2	
R3452-54	ERJ3GEYJ470	M 47 OHM, J, 1/16W	3	
R3460-66	D0GB103JA057	M 10KOHM, J, 1/16W	7	
R3468	D0GB103JA057	M 10KOHM, J, 1/16W	1	
R3469-72	ERJ3GEYJ220	M 22 OHM, J, 1/16W	4	
R3473	ERJ3GEYJ330	M 33 OHM, J, 1/16W	1	
R3474	ERJ3GEYJ272	M 2.7KOHM, J, 1/16W	1	
R3475, 76	ERJ3GEYJ330	M 33 OHM, J, 1/16W	2	
R3477	ERJ3GEYJ272	M 2.7KOHM, J, 1/16W	1	
R3478	ERJ3GEYJ330	M 33 OHM, J, 1/16W	1	
R3480-84	ERJ3GEYJ470	M 47 OHM, J, 1/16W	5	
R3485	ERJ3GEYJ330	M 33 OHM, J, 1/16W	1	
R3491	ERJ3GEYJ220	M 22 OHM, J, 1/16W	1	
R3492	D0GB103JA057	M 10KOHM, J, 1/16W	1	
R3493	D0GB473JA057	M 47KOHM, J, 1/16W	1	
R3501, 02	ERJ6GEY0R00V	M 0 OHM, 1/10W	2	
R3504-07	ERJ6GEY0R00V	M 0 OHM, 1/10W	4	
R3508, 09	ERJ3GEY0R00	M 0 OHM, 1/16W	2	
R3510	ERJ6ENF2002	M 20KOHM, 1/10W	1	
R3511	ERJ6ENF3302	M 33KOHM, 1/10W	1	
R3521, 22	ERJ3GEYJ220	M 22 OHM, J, 1/16W	2	
R3523-25	D0GB103JA057	M 10KOHM, J, 1/16W	3	
R3601	ERJ3GEYJ223	M 22KOHM, J, 1/16W	1	
R3602, 03	D0GB103JA057	M 10KOHM, J, 1/16W	2	
R3604	D0GB183JA057	M 18KOHM, J, 1/16W	1	
R3605	ERJ3GEYJ273	M 27KOHM, J, 1/16W	1	
R3606	ERJ3GEYJ561	M 560 OHM, J, 1/16W	1	
R3607	ERJ3GEYJ471	M 470 OHM, J, 1/16W	1	
R3609	D0GB184JA057	M 180KOHM, J, 1/16W	1	
R3610	ERJ3GEYJ471	M 470 OHM, J, 1/16W	1	
R3611, 12	D0GB473JA057	M 47KOHM, J, 1/16W	2	
R3613	ERJ6GEYG102	M 1KOHM, J, 1/10W	1	
R3614	ERJ6GEYJ101V	M 100 OHM, J, 1/10W	1	
R3621	ERJ3GEYJ223	M 22KOHM, J, 1/16W	1	
R3622, 23	D0GB103JA057	M 10KOHM, J, 1/16W	2	
R3624	D0GB183JA057	M 18KOHM, J, 1/16W	1	
R3625	ERJ3GEYJ273	M 27KOHM, J, 1/16W	1	
R3626	ERJ3GEYJ561	M 560 OHM, J, 1/16W	1	
R3627	ERJ3GEYJ471	M 470 OHM, J, 1/16W	1	
R3629	D0GB184JA057	M 180KOHM, J, 1/16W	1	
R3630	ERJ3GEYJ471	M 470 OHM, J, 1/16W	1	
R3631, 32	D0GB473JA057	M 47KOHM, J, 1/16W	2	
R3633	ERJ6GEYG102	M 1KOHM, J, 1/10W	1	
R3634	ERJ6GEYJ101V	M 100 OHM, J, 1/10W	1	
R3641	ERJ3GEYJ101	M 100 OHM, J, 1/16W	1	
R3642	ERJ3GEYJ104	M 100KOHM, J, 1/16W	1	
R3643	ERJ3GEYD274V	M 270KOHM, J, 1/16W	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3644	D0GB105JA057	M 1MOHM, J, 1/16W	1	
SW3301	TSE995	SWITCH	1	
X3301	H4G1487B0003	VCO	1	
X3401	H1A6144B0003	CRYSTAL	1	